

TABLE 5. SOIL SAMPLE LOCATIONS

Sample Matrix	Sample ID #	Sample Location	Rationale
Soil Samples	SO-01	Unaffected soil sample collected upgradient/upwind from site sources.	Obtain a background sample for attribution of site contaminants.
	SO-02	Unaffected soil sample collected upgradient/upwind from site sources.	Obtain a background sample for attribution of site contaminants.
	SO-03	Unaffected soil sample collected upgradient/upwind from site sources.	Obtain a background sample for attribution of site contaminants.
	SO-04	5-part composite 0"-6" deep from the grassy area north of the high school.	Assess contamination that may have migrated to the high school.
	SO-05	5-part composite 0"-6" deep from the grassy area west of the high school.	Assess contamination that may have migrated to the high school.
	SO-06	5-part composite 0"-6" deep from the grassy area south of the high school.	Assess contamination that may have migrated to the high school.
	SO-07	Grab soil sample from the drainage ditch along Hackberry Street east of Poplar.	Assess contamination that may have migrated along the SW drainage pathway.
	SO-08	Grab soil sample from the drainage ditch along Poplar Street south of Hackberry.	Assess contamination that may have migrated along the SW drainage pathway.
	SO-09	Grab soil sample from the drainage ditch along Poplar Street north of Hackberry.	Assess contamination that may have migrated along SW drainage pathway.
	SO-10	Duplicate soil sample of SO-09.	Quality Assurance/Quality Control (QA/QC).
	SO-11	Grab soil sample from a low spot near residential yard located south of the site.	Assess contamination that may have migrated along the SW drainage pathway.
	SO-12	5-part composite 0"-3" deep from the backyard of a child day care center.	Assess contamination that may have migrated along the SW drainage pathway.
	SO-13	Grab soil sample 6"-12" deep from the public alleyway located south of site.	Assess contamination that may have migrated from the container storage area.
	SO-14	Grab soil sample 6"-12" deep from the public alleyway located south of site.	Assess contamination that may have migrated from the transformer storage area.
	SO-15	Duplicate soil sample of SO-14.	Quality Assurance/Quality Control (QA/QC).
	SO-16	Grab soil sample from a low spot in the residential yard located west of the site.	Assess contamination that may have migrated along the SW drainage pathway.
Source Samples	SO-17	Grab soil sample 6"-12" deep from the transformer off-load area north of shop.	Assess source contaminants that may have originated from spilled transformer oils.
	SO-18	Grab soil sample 6"-12" deep from a low area north of container storage area.	Assess source contaminants that may have originated from spilled transformer oils.
	SO-19	Grab soil sample 6"-12" deep in an area west of the SE transformer storage area.	Assess source contaminants that may have originated from leaking transformers.

TABLE 6A Inorganic Releases in Soil Samples and Highest Background												
CLP Sample ID Number Sample Description	SO-07 MFH-M07 Hackberry St Bar Ditch	SO-08 MFH-M08 Poplar St Bar Ditch	SO-09 MFH-M03 Culvert at Hackberry St	SO-10DUP MFH-M04 Duplicate of SO-09	SO-11 MFH-M05 Nearest Res Bar Ditch	SO-13 MFH-M01 Alleyway W. Location	SO-14 MFH-M02 Alleyway E. Location	SO-15DUP MFH-L97 Duplicate of SO-14	SO-16 MFH-L98 Adjacent Res. Yard	SO-01 MFH-M13 Background Sample	SO-02 MFH-M14 Background Sample	SO-03 MFH-M09 Background Sample
Hazardous Substance	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]
Cadmium	0.45L [0.30]	0.75L [0.32]	0.42L [0.31]	0.48L [0.32]	1.1L [0.26]	0.85L [0.25]	0.77L [0.27]	1.3 [0.26]	0.39L [0.24]	ND [0.27]	0.41L [0.31]	ND [0.30]
Copper	38.4 [0.60]	42.7 [0.64]	105 [0.62]	115 [0.64]	1580 [0.52]	1260 [0.50]	860 [0.54]	1390 [0.52]	1100 [0.48]	11.8 [0.55]	20.5 [0.64]	20.0 [0.60]
Lead	30.6 [0.60]	16 [0.64]	59.7 [0.62]	62.2 [0.64]	73.5 [0.52]	76.5 [0.50]	70.0 [0.54]	57.6 [0.52]	35.2 [0.48]	14.6 [0.55]	27.9 [0.61]	24.6 [0.60]
Cyanide	0.22L [0.08]	0.33L [0.08]	0.35L [0.08]	0.30 [0.08]	0.22L [0.07]	0.23L [0.06]	0.29L [0.07]	0.25L [0.07]	0.18L [0.06]	0.27LUC [0.07]	0.12LUC [0.08]	0.22 [0.08]
Reference												

CRDL = Contract Required Detection Limit.

[SQL] = Sample Quantitation Limit.

■ = Meets observed release criteria.

LUC = Between IDL and CRDL and should be used as a raised detection limit because of apparent blank interference.

L = Reported concentration is between IDL and the CRDL.

ND = Undetected at the laboratory reported detection limit.

CLP = Contract Laboratory Program.

mg/Kg = milligrams per kilogram.

IDL = Instrument Detection Limit.

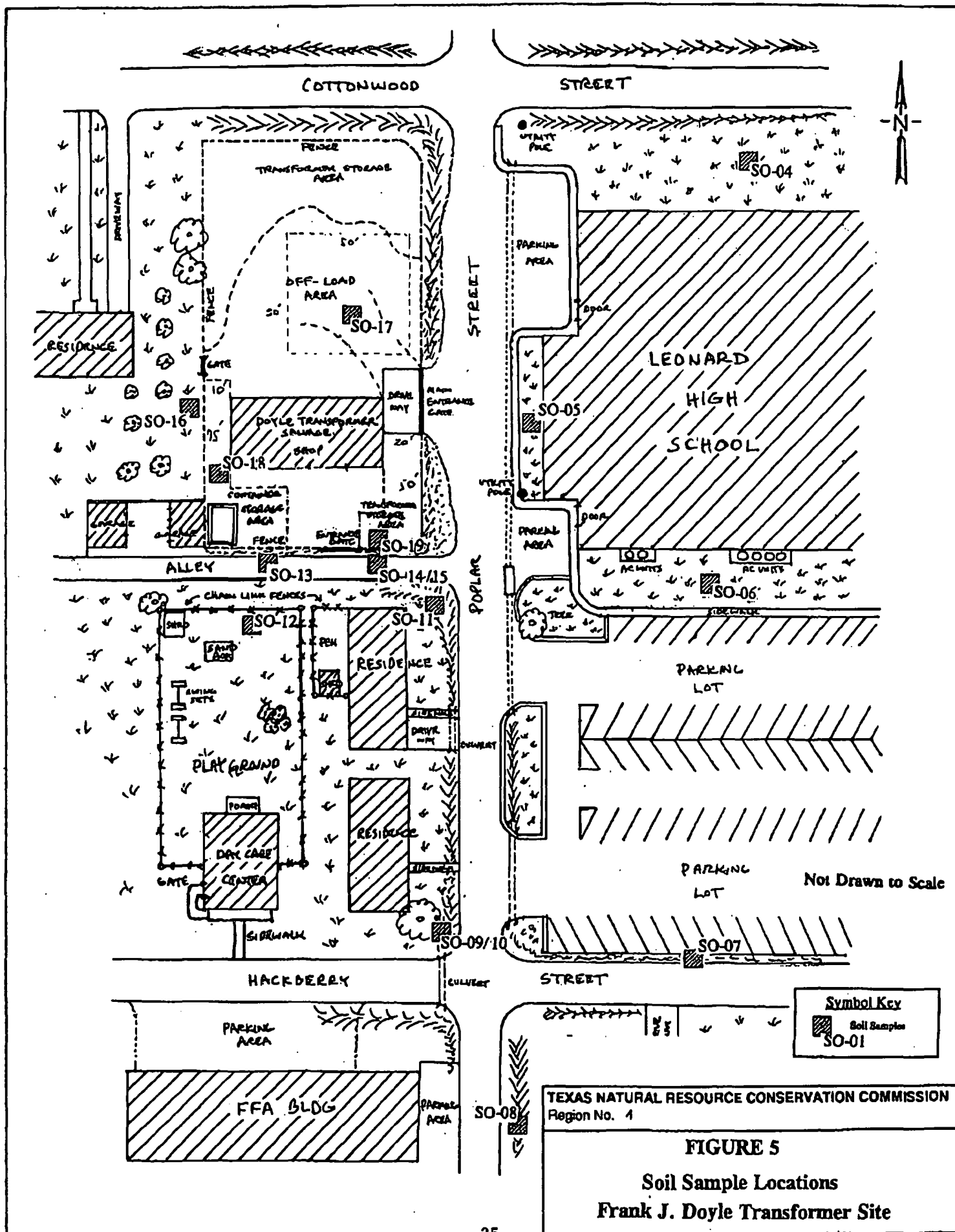


TABLE 6B
Organic Releases in Soil Samples and Highest Background

CLP Sample ID Number Sample Description	SO-07 FFR85 Hackberry St Bar Ditch	SO-09 FFR81 Culvert at Hackberry St	SO-10DUP FFR82 Duplicate of SO-09	SO-11 FFR83 Nearest Res Bar Ditch	SO-11DL FFR83DL Dilution of SO-11	SO-13DL FFR79DL Alleyway W. Location	SO-14DL FFR80DL Alleyway E. Location	SO-15DUPDL FFR75DL Duplicate of SO-14	SO-16DL FFR76DL Adjacent Res. Yard	SO-01 FFR81 Background Sample	SO-02 FFR82 Background Sample	SO-03 FFR87 Background Sample
Hazardous Substance	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]
Phenanthrene	840 [490]	290J [520]	170J [510]	420J [515]	**	**	**	**	**	ND [460]	700J [500]	ND [500]
Fluoranthene	1,500 [490]	620 [520]	470J [510]	2,200 [515]	**	**	**	**	**	ND [460]	1,200J [500]	ND [500]
Pyrene	1,400 [490]	510J [520]	410J [510]	1,800 [515]	**	**	**	**	**	ND [460]	70J [500]	ND [500]
Benzo (a) anthracene	520 [490]	220J [520]	190J [510]	580 [515]	**	**	**	**	**	ND [460]	69J [500]	ND [500]
Chrysene	1,000 [490]	470J [520]	410J [510]	1,100 [515]	**	**	**	**	**	ND [460]	68J [500]	ND [500]
Bis2-Ethylhexyl phthalate	ND [490]	ND [600]	ND [510]	2,100 [515]	**	**	**	**	**	ND [460]	ND [500]	ND [500]
Benzo (b) fluoranthene	910 [490]	380J [520]	340J [510]	1,400 [515]	**	**	**	**	**	ND [460]	36J [500]	ND [500]
Benzo (k) fluoranthene	1,100 [490]	300J [520]	250J [510]	1,000 [515]	**	**	**	**	**	ND [460]	47J [500]	ND [500]
Benzo (a) pyrene	840 [490]	310J [520]	250J [510]	840 [515]	**	**	**	**	**	ND [460]	61J [500]	ND [500]
Indeno (1,2,3 -cd) pyrene	1,100 [490]	360J [520]	320J [510]	1,400 [515]	**	**	**	**	**	ND [460]	30J [500]	ND [500]
Benzo (g,h,i) perylene	1,500 [490]	420J [520]	320J [510]	1,800 [515]	**	**	**	**	**	ND [460]	48J [500]	ND [500]
PCBs Aroclor-1260	420J [400]	2,800J [415]	1,000J [410]	21,000* [515]	35,000J [5,200]	55,000J [21,200]	3,000,000 [459,000]	4,100,000 [444,000]	85,000 [3,900]	ND [46]	33J [500]	340J [500]
Dilution Factor	1	1	1	1	100	100	10,000	10,000	100	1	1	1
Reference												

ND = Not detected at the reported quantitation limit.

* = Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

** = Original sample was not diluted.

■ = Meets observed release criteria.

[SQL] = Sample Quantitation Limit.
 CLP = Contract Laboratory Program.
 ug/Kg = micrograms per kilogram.
 PCBs = polychlorinated biphenyls.

J = Estimated value.

TABLE 1. SOURCE WASTE CHARACTERISTICS

Source Identity	Source Location	Source Description	Estimated Quantity
Transformer Storage Area	Southeast portion of site	Transformer oils containing PCBs that may have spilled/discharged to adjacent soils	<u>Contaminated Soils</u> L-shaped area 20'x50' + 10'x20' = 1,200 ft ²
Container Storage Area	Southwest portion of site	Transformer oils containing PCBs that may have spilled from transfer operations.	<u>Contaminated Soils</u> L-shaped area 10'x75' + 20'x30' = 1,350 ft ²
Transformer Off-Load Area	North central portion of site	Transformer oils containing PCBs that may have spilled during off-load operations.	<u>Contaminated Soils</u> Box-shaped area 50'x50' = 2,500 ft ²

Sources : Reference 5, pages 2-3 and 7; Appendix B, pages 12, 16.

A total of three (3) source characterization soil samples (SO-17, SO-18 and SO-19) were collected during the SSI at depths 6"-12" just below a compacted gravel base from the three identified facility waste management areas to: (1) substantiate prior sample results, (2) determine current levels of remaining source contamination, and (3) obtain Contract Laboratory Program (CLP) quality data. A summary of sample location/rationale is provided in Table 5 and approximate sample locations are shown in Figure 5. Sample location photographs include Photos #19 thru #22 (see Appendix A). Sample documentation was recorded in a field log book (see Appendix B).

All source characterization samples were analyzed for CLP metals, cyanide, polychlorinated biphenyls (PCBs), and CLP organics (volatiles, semivolatiles and pesticides). Inorganic analysis was performed by AATS, 1700 West Albany, Suite C, Broken Arrow, Oklahoma, and organic analysis performed by Clayton Environmental Consultants, 22345 Roethal Drive, Novi, Michigan. Summaries of chemical constituents detected 3X above highest background levels are shown below in Tables 2a and 2b. All additional analytical results are shown in Appendix C to include samples SO-17 thru SO-19, ER-01, ER-02, FB-01 and FB-02.

TABLE 2A Inorganics Detected in Source Samples and Highest Background						
CLP Sample ID Number Sample Description	SO-17 MFH-L99 Transformer Off-Load Area	SO-18 MFH-L94 Container Storage Area	SO-19 MFH-L95 Transformer Storage Area	SO-01 MFH-M13 Background Sample	SO-02 MFH-M14 Background Sample	SO-03 MFH-M09 Background Sample
Hazardous Substance	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]	mg/Kg [SQL]
Copper	279 [0.53]	204 [0.53]	30.9 [0.51]	11.6 [0.55]	28.5 [0.51]	20.0 [0.60]
Reference						

CRDL = Contract Required Detection Limit. L = Reported concentration is between IDL and the CRDL.
 [SQL] = Sample Quantitation Limit. ND = Undetected at the laboratory reported detection limit.
 ■ = Area of observed contamination, i.e., a value > 3X the highest background value; or for a background sample, indicates the highest detected value. CLP = Contract Laboratory Program.
 mg/Kg = milligrams per kilogram. IDL = Instrument Detection Limit

TABLE 2B Organics Detected in Source Samples and Highest Background								
CLP Sample ID Number Sample Description	SO-17 FFR77 Transformer Off-Load Area	SO-18 FFR72 Container Storage Area	SO-18DL FFR72DL Dilution of SO-18	SO-19 FFR73 Transformer Storage Area	SO-19DL FFR73DL Dilution of SO-19	SO-01 FFR91 Background Sample	SO-02 FFR92 Background Sample	SO-03 FFR87 Background Sample
Hazardous Substance	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]	ug/Kg [SQL]
Hexachloro benzene	ND [13,000]	15,000 [14,000]	**	ND [440]	**	ND [460]	ND [500]	ND [500]
PCBs Aroclor-1260	160J [42]	1,400,000* [44,000]	2,300,000J [440,000]	1,700* [44]	3,100J [440]	ND [46]	33J [50]	340J [50]
Dilution Factor	1	1,000	10,000	1	10	1	1	1
Reference								

ND = Not detected at the reported quantitation limit.

* = Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

** = Original sample was not diluted.

■ = Area of observed contamination, i.e., a value > 3X the highest

background value; or for a background sample, indicates the highest detected value.

[SQL] = Sample Quantitation Limit.

CLP = Contract Laboratory Program.

ug/Kg = micrograms per kilogram.

PCBs = polychlorinated biphenyls.

J = Estimated value.

Table 2a reveals a single inorganic constituent copper detected in two of three source samples that was greater than three times (3x) the highest detected background level (3x20.6 mg/kg = 61.8 mg/kg) identified from soil sample SO-02. Soil sample SO-17 and SO-18 indicated moderate levels of copper at 279 mg/kg and 204 mg/kg.

Table 2b indicates a semi-volatile organic compound and a PCB that were detected greater than three times (3x) the highest background level or above a sample quantitation limit. Soil sample SO-18 indicated moderate levels of hexachlorobenzene at 15,000 ug/kg and soil samples SO-18 and SO-19 indicated significantly elevated levels of qualified PCBs (Aroclor-1260) at 2,300,000 ug/kg and 3,100 ug/kg respectively.

There were no volatiles, cyanide or pesticides in any of the source soil samples that were detected greater than 3X the highest background level.

